

**Notice of Allowability**

Application No.

10/700,021

Applicant(s)

LYONS ET AL.

Examiner

Art Unit

Monica D. Harrison

2813

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed 11/3/03.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 03 November 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>11/3/03</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                              | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

1. Please amend claim 1 as follows; ~~An~~ A method of making an organic memory cell comprising; providing a first electrode on a substrate; forming a photosensitive dielectric over the substrate; patterning the photosensitive dielectric to provide a patterned dielectric having openings therein; forming an organic semiconductor layer over the first electrode and within the openings of the patterned dielectric, the organic semiconductor layer comprising at least one of a conjugated organic polymer, a conjugated organometallic polymer, a buckyball, and a carbon nanotube; providing a second electrode over the organic semiconductor layer; and forming a passive layer comprising a conductivity facilitating compound between the first electrode and the organic semiconductor layer and/or between the second electrode and the organic semiconductor layer.

#### *Allowable Subject Matter*

2. Claims 1-20 are allowed over the prior art of record.

#### *Reasons for Allowance*

3. The following is an examiner's statement of reasons for allowance: The primary reason for allowance of the claims is that the prior art neither teaches nor fairly suggest a method of making an organic memory cell comprising; forming a photosensitive dielectric over the

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substrate; patterning the photosensitive dielectric to provide a patterned dielectric having openings therein; forming an organic semiconductor layer over the first electrode and within the openings of the patterned dielectric, the organic semiconductor layer comprising at least one of a conjugated organic polymer, a conjugated organometallic polymer, a buckyball, and a carbon nanotube in claims 1-8 and in the context of the recited process and forming a photosensitive dielectric over the substrate; patterning the photosensitive dielectric to provide a patterned dielectric having openings therein; forming a passive layer comprising a conductivity facilitating compound on the first electrode; forming an organic semiconductor layer over the passive layer and within the openings of the patterned dielectric, the organic semiconductor layer comprising at least one of a conjugated organic polymer, a conjugated organometallic polymer, a buckyball, and a carbon nanotube in claims 9-16 and in the context of the recited process.

The primary reason for allowance of the claims is that the prior art neither teaches nor fairly suggest an organic semiconductor memory device comprising a patternable, photosensitive dielectric on the substrate; and a plurality of organic semiconductor memory cells comprising a first electrode, a passive layer adjacent the first electrode, an organic semiconductor layer comprising at least one of a conjugated organic polymer, a conjugated organometallic polymer, a buckyball, and a carbon nanotube adjacent the passive layer, and a second electrode adjacent the organic semiconductor layer in claims 17-20 and in the context of the recited device.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica D. Harrison whose telephone number is 571-272-1959.

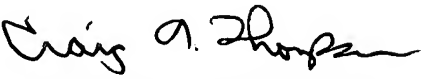
The examiner can normally be reached on M-F 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr. can be reached on 571-272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monica D. Harrison  
AU 2813

mdh  
May 11, 2005

  
**CRAIG A. THOMPSON**  
**PRIMARY EXAMINER**